In children (adults) with CP, osteoporosis definition has been precised by ISCD (2008), i.e., the association of a significant history of fracture and a bone densitometry of less than 2 Z-score; the result has to be adjusted with regards to age, sex and height.

The main risk factors of osteoporosis in CP children (adults) are prolonged immobilization secondary to motor deficit, qualitative and quantitative deficits within food intake resulting in calcium and D vitamin deficiency, endocrine disorders such as deficit in growth hormone, puberty disorders, hypogonadism, thyroid disorders. Some medications such as carbamazepin, phenytoin, proton pump inhibitors, neuroleptics, steroids, and heparin may also concur to the occurrence of osteoporosis in these CP children (adults).

Osteoporosis treatment is based on: eviction or correction of risk factors, biphosphonates, and exercise when possible, verticalisation and electrotherapy. these various therapies are more or less standardized, and more or less efficient. Moreover, they are cumbersome.

Presently, there are very few studies on this pathology within that population despite that osteoporosis has major impact on the daily life of these CP children.

Further reading

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P034-e

Assessment of muscle strength and aerobic capacity during exercise in children with cerebral palsy

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Keywords: Cerebral palsy; Isokinetic; Aerobic capacity

Introduction.– The aims of this study is to evaluate muscle function and cardiorespiratory fitness during exercise in children with cerebral palsy (CP) compared to healthy children.

Materials and methods.– This is a prospective study of children with cerebral palsy in spastic form. No child was on wheelchairs or requires technical assistance with walking. We have included a second group of children free of any brain injury to compare the different results. All patients underwent an anthropometric measure with a kind impédencemétre TANITA1 model TBF 300 (weight, height, body mass index BMI, lean mass, fat mass), functional tests, including an assessment of the strengthisokinetic muscle of both lower limbs on a isokinetic device (Cybex Norm II Medimex associated with its module TEF) and a standardized exercise test (EE) using an electromagnetic cycle ergo meter (Ergoline program Zan 680).

Result.– The average age of children with cerebral palsy (PC) was 14.7 + 5.03 years and 14.6 + 4.67 years for child witnesses. Children with PC have a significantly lower size than in control children ($p = 0.007$), however they have a higher percentage of fat mass higher than healthy children ($p = 0.004$). Weight and BMI and lean mass were significantly similar in both groups of children. Compared with healthy children, children with CP have isokinetic muscle strength of quadriceps and hamstring muscles lower with respectively ($p < 0.01$) and ($p = 0.003$) The metabolic equivalent (METS) was better in healthy children ($p < 0.03$).

Conclusion.– In children with CP, the aerobic capacity during exercise is lower compared with healthy children in association with an impaired maximal strength isokinetic quadriceps and hamstring muscles deficient compared to healthy children.

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P035-e

Preliminary study of validation of the Arabic dialect version of ''Bread Child Questionnaire'' (Varni and Thompson, 1985) in assessing pain in children

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Keywords: Pain; Evaluation; Arabic dialect; Child pain questionnaire

Objectives.– Translated into Arabic dialect and validate the ''Bread Child Questionnaire'' (Varni and Thompson, 1985), on a Tunisian population.

Materials and methods.– This is a descriptive study of patients hospitalized at the department of physical medicine and rehabilitation for diverse etiologies. The ''Child Bread Questionnaire'' is a self- or heteroquestionnaire with two major items on the location and timing of pain with six levels of response (no pain to very acute pain). The Arabic translation was performed using the method translation/translation cons.

Result.– Being validated.

Conclusion.– In our exercise in MPRF with children, one is often confronted with situations inducing the frequency of pain in children with disabilities and which shape the quality of care and especially the experience of the child and family but also caregivers who find themselves ''pain generators'' hence the need to ensure an assessment of pain with the right tools.

The translation and validation of the evaluation of ''child bread questionnaire'' in Arabic dialect is an interesting tool helping to provide a simple tool for measuring the acute pediatric pain in the Tunisian population.

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P036-e

Upper limb in children with hemiplegia: Motor evaluations, medical and physical therapies available in 2012

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Keywords: Congenital hemiplegia; Unilateral cerebral palsy; Upper limb; Motor function; Evaluation; Physical therapy

Since 10 years the upper limb's ''management'' of children with spastic hemiplegia has significantly improve, whether in term of evaluation, medical and rehabilitation therapies [1].

However it remains for professionals not always easy to make the right choice within the panel of available tools.

The R4P Network (Rhône Alpes Pediatric Rehabilitation Network) undertook a work at the regional level in order to offer ''good practice'' recommendations on this theme.

This study includes 3 steps:

– a literature review including, epidemiology, the existing evaluation alternative as well as medicinal and physical therapies;

– a discussion of the literature findings by professional expert and their current practice, in order to draw a set of recommendation;

– dissemination of the recommendations and tools developed by the research group.

The first part of this study to be outlined during this communication cession will be related to the current situation: characteristics of the concerned population, evaluations ranked as per CIF, past and new therapies, objectives outline.

Reference

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